THAT WHICH IS CLAIMED:

1. A sheet of thermoplastic film adapted for use in foam-in-bag packaging, the film having a heat resistant coating having a self-adhesion temperature in the range from about 250^0 F to 450^0 F and wherein the coating substantially covers a surface of the film sufficient to reduce self-adhesion of the film at temperatures below the self-adhesion temperature of the coating, whereby foam-in-bag packages formed therefrom are easily separated after the foam is formed.

2. The film sheet according to Claim 1, wherein the coating has a self-adhesion temperature in excess of about 275^0 F.

3. The film sheet according to Claim 1, wherein the coating is ink resin; ink varnish; a silicone release coating; polyvinyl alcohol; cellulose acetate butyrate; cellulose acetate propionate; or a crosslinked varnish.

4. The film sheet according to Claim 1, wherein the coating is a flexographic or gravure ink.

5. The film sheet according to Claim 4, wherein the ink coating is solvent-based, water-based, or energy cured.

6. The film sheet according to Claim 5, wherein the ink coating has a resin or varnish that is comprised of urethanes, acrylics, carboxylated acrylics, nitrocellulose, ethyl cellulose, polyvinyl butryl, polyamides, polyimides, polyketones, or cellulose esters, or combinations thereof, acrylics, acrylates, urethane acrylics, acrylated or methacrylated prepolymers, acrylated oils, acrylated silicone oils, acrylated amines, soy protein, or combinations thereof.

7. The film sheet according to Claim 1, wherein the heat resistant coating contains silicone.

8. The film sheet according to Claim 7, wherein the silicone is present in an amount that is from 0.1 to 10 % by weight relative to the total weight of the coating.

9. The film sheet according to Claim 1, wherein the thermoplastic material is polypropylene, high density polyethylene, low density polyethylene, linear low density polyethylene, ethylene vinyl acetate, ethylene methyl acrylate, ethylene ethyl acrylate, very low density polyethylene, ultra low density polyethylene, ionomers, polyurethane, polyvinyl chloride, or polybutylene, or copolymers or blends thereof.

10. The film sheet according to Claim 1, wherein the film is a continuous roll of heat resistant film.

11. The film sheet according to Claim 1, wherein the heat resistant coating has a coat weight from about 0.05 to 1 lb/ream.

12. A heat resistant bag adapted for use in foam-in-place packaging comprising:

a thermoplastic film material having three closed edges and an open edge defining an interior space; and

a heat resistant coating having a self-adhesion temperature in the range from about 250^0 F to 450^0 F and wherein the coating substantially covers the exterior surface of the bag sufficient to reduce self-adhesion of the film at temperatures below the self-adhesion temperature of the coating, whereby foam-in-bag packages formed therefrom are easily separated after the foam is formed.

13. The bag according to Claim 12, wherein the bag is disposed on a continuous roll of successive thermoplastic bags, and wherein each successive bag is detachable from the continuous roll.

14. The bag according to Claim 13, wherein a perforation separates each successive bag.

15. The bag according to Claim 12, wherein the coating has a self-adhesion temperature in excess of about 425^0 F.

16. The bag according to Claim 12, wherein the coating is an ink resin or ink varnish that is solvent-based, water-based, or energy cured.

17. The bag according to Claim 16, wherein the ink coating has a resin or varnish that is comprised of urethanes, acrylics, carboxylated acrylics, nitrocellulose, polyamides, polyimides, polyketones, or cellulose esters, or combinations thereof.

18. The bag according to Claim 12, wherein the ink coating contains silicone.

19. The bag according to Claim 12, wherein the yield strength of the film is greater than the force necessary to separate two adjacent bags.

20. The bag according to Claim 12, wherein the thermoplastic film is high density polyethylene, low density polyethylene, linear low density polyethylene, ethylene vinyl acetate, ethylene methyl acrylate, ethylene ethyl acrylate, very low-density polyethylene, ultra low-density polyethylene, ionomers, polyurethane, polyvinyl chloride, or polybutylene, or copolymers or blends thereof.

21. The bag according to Claim 20, wherein the film is high density polyethylene.

22. A foam cushion for packaging comprising:

a bag that is formed from a thermoplastic film material that is closed on all four edges and defining an interior space;

a heat resistant coating that substantially covers the exterior surface of the bag; and

a foam substrate disposed in the interior of the bag that is formed from mixing a first and second foam precursor together.

23. The foam cushion according to Claim 23 wherein the heat resistant coating has a self-adhesion temperature in excess of about 275^0 F.

24. The foam cushion according to Claim 22, wherein the heat resistant coating has a self-adhesion temperature in excess of about 425^0 F.

25. The foam cushion according to Claim 25, wherein the heat resistant coating is a flexographic or gravure ink, silicone release coating, polyvinyl alcohol, cellulose acetate butyrate, cellulose acetate propionate, or a crosslinked varnish.

26. The foam cushion according to Claim 25, wherein the flexographic or gravure ink is solvent-based, water-based, or energy cured.

27. The foam cushion according to Claim 26, wherein the heat resistant coating contains silicone.

28. The foam cushion according to Claim 27, wherein the silicone is present in an amount that is from 0.5 to 2 % by weight relative to the total weight of the coating.

29. The foam cushion according to Claim 22, wherein the thermoplastic material is polypropylene, high density polyethylene, low density polyethylene, linear low density polyethylene, ethylene vinyl acetate, ethylene methyl acrylate, ethylene ethyl acrylate, very low density polyethylene, ultra low density polyethylene, ionomers, polyurethane, polyvinyl chloride, polybutylene, or copolymers or blends thereof.

30. The foam cushion according to Claim 22, wherein the thermoplastic material is high density polyethylene.

31. The foam cushion according to Claim 22, wherein the foam substrate is a foam having a density from about 0.1 to 4 pcf.

32. The foam cushion according to Claim 22, wherein the foam substrate is polyurethane.

33. The foam cushion according to Claim 22, wherein the edges of the bag are closed with a heat seal.

34. A foam cushion for packaging comprising:

a bag that is formed from a thermoplastic material that is closed on all its edges and defining an interior space;

an ink resin or varnish coating that substantially covers the exterior of the bag having a self-adhesion temperature from about 250°F to 450°F; and

a rigid foam substrate disposed in the interior of the bag.

35. The foam cushion according to Claim 34, wherein the ink coating is solvent-based, water-based, or energy cured.

36. The foam cushion according to Claim 35, wherein the ink coating has a resin that is comprised of urethanes, acrylics, carboxylated acrylics, nitrocellulose, polyamides, polyimides, polyketones, or cellulose esters, or combinations thereof.

37. The foam cushion according to Claim 35, wherein the solvent-based ink coating has a solvent that is comprised of ethanol, propanol, isopropanol, isobutanol, ethyl acetate, propyl acetate, butyl acetate, heptane, or naphtha.

38. The foam cushion according to Claim 34, wherein the foam substrate has a density that is from about 0.25 to 2 pcf.

39. The foam cushion according to Claim 34, wherein the ink coating has a coat weight from about 0.05 to 1 1b/ream.

40. The foam cushion according to Claim 34, wherein the foam cushion has a peel strength that is from about 0 to 2 lb/inch.

41. The foam cushion according to Claim 34, wherein reacting an isocyanate with a polyol produces the foam substrate.

42. A heat resistant foam-in-bag cushion precursor for producing a foam-in-bag cushion upon demand comprising:

a bag formed from a flexible plastic film material and defining therein an enclosed space of a volume corresponding to the size of the foam cushion to be produced, the enclosed space being vented to the outside of the bag to permit the escape of gases generated during the formation of the foam cushion while preventing the escape of foam therefrom;

a heat resistant coating that substantially covers the exterior surface of the bag;

a foam precursor packet positioned in a predetermined location within the enclosed space within the bag and including a plurality of compartments therein, the packet including a first compartment and a second compartment with a first frangible seal separating the first and second compartments and adapted to be broken when it is desired to form the foam cushion, the packet also including a second frangible seal between the second compartment and the enclosed space in the bag, the packet being formed from a barrier material capable of maintaining foam precursor components in a relatively stable and unreacted state;

a first foam precursor component contained in the first compartment of the packet;

a second foam precursor component contained in the second compartment of the packet; and

the first and second foam precursor components being adapted to be mixed upon breaking of the first frangible seal and to react to form foam which will break the second frangible seal and expand from the packet into the enclosed space in the bag until the enclosed space is substantially filled with foam and the cushion is formed.

43. The foam-in-bag cushion according to Claim 42, wherein the heat resistant coating has a self-adhesion temperature that is from about 250^0 F to 450^0 F.

44. The foam-in-bag cushion according to Claim 43, wherein the heat resistant coating is an ink resin; ink varnish; a silicone release coating; polyvinyl alcohol; cellulose acetate butyrate; cellulose acetate propionate; or a crosslinked varnish.

45. The foam-in-bag cushion according to Claim 44, wherein the coating is a flexographic ink or gravure ink having a self-adhesion temperature that exceeds 275^0 F.

46. The foam-in-bag cushion according to Claim 45, wherein ink coating has a resin or varnish that is comprised of urethanes, acrylics, acrylates, carboxylated acrylics, nitrocellulose, polyamides, polyimides, polyketones, ethyl cellulose, polyvinyl butryl, cellulose esters, or combinations thereof.

47. The foam-in-bag cushion according to Claim 42, wherein the heat resistant coating contains silicone.

48. The foam-in-bag cushion according to Claim 42, wherein the heat resistant coating has a coat weight from about 0.3 to 0.5 lb/ream.

49. A heat resistant foam cushion for protectively packaging an article that is produced by

forming a bag having an exterior surface that is substantially covered with a heat resistant coating comprising the steps of:

providing a sheet of thermoplastic material having a first surface that is substantially covered with a heat resistant coating and a second surface that is not covered with a heat resistant coating;

center-folding the thermoplastic sheet so that the first and second surfaces form a double web with one closed edge defined by the center fold and one open edge defined by the adjacent edges of the sheet, and wherein the surface having the heat resistant coating face outwardly and the second surface is folded into two surfaces that are in a face-to-face arrangement and define the interior of the bag;

injecting a foamable composition into the center-folded web between the two folded portions of the sheet; and

closing the open edges of the sheet to close the bag.

50. The foam cushion according to Claim 49, wherein the heat resistant coating is a flexographic ink.

51. The foam cushion according to Claim 50, wherein the ink is water-based, solvent-based, or energy cured.

52. The foam cushion according to Claim 49, wherein the sheet of thermoplastic material has been pre-centerfolded.

53. A heat resistant foam cushion for protectively protecting an article that is produced by

forming a bag having an exterior surface that is substantially covered with a heat resistant coating comprising the steps of

providing a first and second sheet of thermoplastic material each having a surface that is substantially covered with a heat resistant coating;

superimposing the first and second sheets in face-to-face contact such that the heat resistant surfaces are not in contact;

sealing a transverse edge and longitudinal edges of the sheets to produce a bag having an open transverse edge for receiving a predetermined amount of foamable composition;

injecting a predetermined amount of foamable composition into the bag; and

closing the open edge to close the bag.

54. A foam cushion according to Claim 53, wherein the heat resistant coating is solvent-based, water-based, or energy cured.

55. A method for protectively packaging an article comprising:

providing a container to package the article;

forming a first foam cushion for protecting the article wherein the foam cushion is comprised of a thermoplastic bag having an exterior surface that is covered with a heat resistant coating, and a foam substrate disposed inside the bag that is formed from mixing a first and second foam precursor;

placing the first foam cushion inside the container;

placing the article into the container so that is disposed on top of the first foam cushion;

forming a second foam cushion that is comprised of a thermoplastic bag having an exterior surface that is coated with a heat resistant coating, and a foam substrate disposed inside the bag that is formed from mixing the first and second foam precursors;

placing the second foam cushion inside the container so that the article is protectively sandwiched in between the first and second foam cushions.

56. A method according to Claim 55, wherein the bag is preformed and disposed on a continuous roll of successive thermoplastic bags, and wherein each successive bag is detachable from the continuous roll.

57. A method according to Claim 56, wherein a perforation separates each successive bag.

58. A method of preparing a foam packaging cushion comprising:

providing a sheet of thermoplastic material having a first surface that is substantially covered with a heat resistant coating and a second surface that is not covered with a heat resistant coating;

dispensing a first and second foam precursor onto the second surface of the sheet to produce an expanding foam, and wherein the expanding foam defines an area on the second surface that is covered with the foam and an area that extends circumferentially outward around the periphery of the second surface that is not covered with the foam; and

folding the periphery of the sheet over the expanding foam to enclose the expanding foam within the sheet and thereby form the cushion.

59. The method according to Claim 58, wherein the step of providing a sheet further includes disposing the sheet into a container so that the surface having the heat resistant coating faces a surface of the container.

60. The method according to Claim 59 further comprising the steps of:

placing an article on the packaging cushion prepared in Claim 58; and

forming a second foam cushion within the container using the method described in Claim 58 so that the article is sandwiched between the packaging cushion and the second foam cushion.

61. A method of producing a heat resistant film comprising:

providing a sheet of thermoplastic film; and

applying a heat resistant coating to a surface of the sheet that substantially covers the surface, and wherein the heat resistant coating is an ink resin or ink varnish and has a self-adhesion temperature that is from about 250^0 F to 450^0 F.

62. The method according to Claim 61, wherein the ink is printed onto the film.